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## NOTICE OF ALLOWANCE AND FEE(S) DUE

25191 7590 09/16/2009

BURR & BROWN  
PO BOX 7068  
SYRACUSE, NY 13261-7068

EXAMINER

WEST, JEFFREY R

ART UNIT

PAPER NUMBER

2857

DATE MAILED: 09/16/2009

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/758,176

01/15/2004

Richard Reynolds

830\_012

4849

TITLE OF INVENTION: QUALITY ASSESSMENT TOOL

APPLN. TYPE	SMALL ENTITY	ISSUE FEE DUE	PUBLICATION FEE DUE	PREV. PAID ISSUE FEE	TOTAL FEE(S) DUE	DATE DUE
nonprovisional	YES	\$755	\$300	\$0	\$1055	12/16/2009

**THE APPLICATION IDENTIFIED ABOVE HAS BEEN EXAMINED AND IS ALLOWED FOR ISSUANCE AS A PATENT. PROSECUTION ON THE MERITS IS CLOSED. THIS NOTICE OF ALLOWANCE IS NOT A GRANT OF PATENT RIGHTS. THIS APPLICATION IS SUBJECT TO WITHDRAWAL FROM ISSUE AT THE INITIATIVE OF THE OFFICE OR UPON PETITION BY THE APPLICANT. SEE 37 CFR 1.313 AND MPEP 1308.**

**THE ISSUE FEE AND PUBLICATION FEE (IF REQUIRED) MUST BE PAID WITHIN THREE MONTHS FROM THE MAILING DATE OF THIS NOTICE OR THIS APPLICATION SHALL BE REGARDED AS ABANDONED. THIS STATUTORY PERIOD CANNOT BE EXTENDED. SEE 35 U.S.C. 151. THE ISSUE FEE DUE INDICATED ABOVE DOES NOT REFLECT A CREDIT FOR ANY PREVIOUSLY PAID ISSUE FEE IN THIS APPLICATION. IF AN ISSUE FEE HAS PREVIOUSLY BEEN PAID IN THIS APPLICATION (AS SHOWN ABOVE), THE RETURN OF PART B OF THIS FORM WILL BE CONSIDERED A REQUEST TO REAPPLY THE PREVIOUSLY PAID ISSUE FEE TOWARD THE ISSUE FEE NOW DUE.**

### HOW TO REPLY TO THIS NOTICE:

#### I. Review the SMALL ENTITY status shown above.

If the SMALL ENTITY is shown as YES, verify your current SMALL ENTITY status:

A. If the status is the same, pay the TOTAL FEE(S) DUE shown above.

B. If the status above is to be removed, check box 5b on Part B - Fee(s) Transmittal and pay the PUBLICATION FEE (if required) and twice the amount of the ISSUE FEE shown above, or

If the SMALL ENTITY is shown as NO:

A. Pay TOTAL FEE(S) DUE shown above, or

B. If applicant claimed SMALL ENTITY status before, or is now claiming SMALL ENTITY status, check box 5a on Part B - Fee(s) Transmittal and pay the PUBLICATION FEE (if required) and 1/2 the ISSUE FEE shown above.

II. PART B - FEE(S) TRANSMITTAL, or its equivalent, must be completed and returned to the United States Patent and Trademark Office (USPTO) with your ISSUE FEE and PUBLICATION FEE (if required). If you are charging the fee(s) to your deposit account, section "4b" of Part B - Fee(s) Transmittal should be completed and an extra copy of the form should be submitted. If an equivalent of Part B is filed, a request to reapply a previously paid issue fee must be clearly made, and delays in processing may occur due to the difficulty in recognizing the paper as an equivalent of Part B.

III. All communications regarding this application must give the application number. Please direct all communications prior to issuance to Mail Stop ISSUE FEE unless advised to the contrary.

**IMPORTANT REMINDER: Utility patents issuing on applications filed on or after Dec. 12, 1980 may require payment of maintenance fees. It is patentee's responsibility to ensure timely payment of maintenance fees when due.**

# **PART B - FEE(S) TRANSMITTAL**

**Complete and send this form, together with applicable fee(s), to: Mail Mail Stop ISSUE FEE  
Commissioner for Patents  
P.O. Box 1450  
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or Fax (571)-273-2885**

INSTRUCTIONS: This form should be used for transmitting the ISSUE FEE and PUBLICATION FEE (if required). Blocks 1 through 5 should be completed where appropriate. All further correspondence including the Patent, advance orders and notification of maintenance fees will be mailed to the current correspondence address as indicated unless corrected below or directed otherwise in Block 1, by (a) specifying a new correspondence address; and/or (b) indicating a separate "FEE ADDRESS" for maintenance fee notifications.

CURRENT CORRESPONDENCE ADDRESS (Note: Use Block 1 for any change of address)

25191 7590 09/16/2009

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## **Certificate of Mailing or Transmission**

I hereby certify that this Fee(s) Transmittal is being deposited with the United States Postal Service with sufficient postage for first class mail in an envelope addressed to the Mail Stop ISSUE FEE address above, or being facsimile transmitted to the USPTO (571) 273-2885, on the date indicated below.

(Depositor's name)
(Signature)
(Date)

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/758,176	01/15/2004	Richard Reynolds	830_012	4849

TITLE OF INVENTION: QUALITY ASSESSMENT TOOL

APPLN. TYPE	SMALL ENTITY	ISSUE FEE DUE	PUBLICATION FEE DUE	PREV. PAID ISSUE FEE	TOTAL FEE(S) DUE	DATE DUE
nonprovisional	YES	\$755	\$300	\$0	\$1055	12/16/2009

EXAMINER	ART UNIT	CLASS-SUBCLASS
WEST, JEFFREY R	2857	702-069000

1. Change of correspondence address or indication of "Fee Address" (37 CFR 1.363).

- ☐ Change of correspondence address (or Change of Correspondence Address form PTO/SB/122) attached.
- ☐ "Fee Address" indication (or "Fee Address" Indication form PTO/SB/47; Rev 03-02 or more recent) attached. **Use of a Customer Number is required.**

2. For printing on the patent front page, list

- (1) the names of up to 3 registered patent attorneys or agents OR, alternatively, 1 \_\_\_\_\_
- (2) the name of a single firm (having as a member a registered attorney or agent) and the names of up to 2 registered patent attorneys or agents. If no name is listed, no name will be printed. 2 \_\_\_\_\_
- 3 \_\_\_\_\_

3. ASSIGNEE NAME AND RESIDENCE DATA TO BE PRINTED ON THE PATENT (print or type)

PLEASE NOTE: Unless an assignee is identified below, no assignee data will appear on the patent. If an assignee is identified below, the document has been filed for recordation as set forth in 37 CFR 3.11. Completion of this form is NOT a substitute for filing an assignment.

(A) NAME OF ASSIGNEE (B) RESIDENCE: (CITY and STATE OR COUNTRY)

Please check the appropriate assignee category or categories (will not be printed on the patent) : ☐ Individual ☐ Corporation or other private group entity ☐ Government

4a. The following fee(s) are submitted:

- ☐ Issue Fee
- ☐ Publication Fee (No small entity discount permitted)
- ☐ Advance Order - # of Copies \_\_\_\_\_

4b. Payment of Fee(s); (Please first reapply any previously paid issue fee shown above)

- ☐ A check is enclosed.
- ☐ Payment by credit card. Form PTO-2038 is attached.
- ☐ The Director is hereby authorized to charge the required fee(s), any deficiency, or credit any overpayment, to Deposit Account Number \_\_\_\_\_ (enclose an extra copy of this form).

5. Change in Entity Status (from status indicated above)

- ☐ a. Applicant claims SMALL ENTITY status. See 37 CFR 1.27. ☐ b. Applicant is no longer claiming SMALL ENTITY status. See 37 CFR 1.27(g)(2).

NOTE: The Issue Fee and Publication Fee (if required) will not be accepted from anyone other than the applicant; a registered attorney or agent; or the assignee or other party in interest as shown by the records of the United States Patent and Trademark Office.

Authorized Signature \_\_\_\_\_

Date \_\_\_\_\_

Typed or printed name \_\_\_\_\_

Registration No. \_\_\_\_\_

This collection of information is required by 37 CFR 1.311. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 12 minutes to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, Virginia 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, Virginia 22313-1450.

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10/758,176	01/15/2004	Richard Reynolds	830_012	4849
25191	7590	09/16/2009	EXAMINER	
BURR & BROWN PO BOX 7068 SYRACUSE, NY 13261-7068			WEST, JEFFREY R	
			ART UNIT	PAPER NUMBER
			2857	
DATE MAILED: 09/16/2009				

## Determination of Patent Term Adjustment under 35 U.S.C. 154 (b) (application filed on or after May 29, 2000)

The Patent Term Adjustment to date is 0 day(s). If the issue fee is paid on the date that is three months after the mailing date of this notice and the patent issues on the Tuesday before the date that is 28 weeks (six and a half months) after the mailing date of this notice, the Patent Term Adjustment will be 0 day(s).

If a Continued Prosecution Application (CPA) was filed in the above-identified application, the filing date that determines Patent Term Adjustment is the filing date of the most recent CPA.

Applicant will be able to obtain more detailed information by accessing the Patent Application Information Retrieval (PAIR) WEB site (<http://pair.uspto.gov>).

Any questions regarding the Patent Term Extension or Adjustment determination should be directed to the Office of Patent Legal Administration at (571)-272-7702. Questions relating to issue and publication fee payments should be directed to the Customer Service Center of the Office of Patent Publication at 1-(888)-786-0101 or (571)-272-4200.

<b>Notice of Allowability</b>	<b>Application No.</b>	<b>Applicant(s)</b>	
	10/758,176	REYNOLDS ET AL.	
	<b>Examiner</b>	<b>Art Unit</b>	
	Jeffrey R. West	2857	

**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--**

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to the Pre-Brief Conference Request filed August 10, 2009.
2. ☒ The allowed claim(s) is/are 1-5 and 9.
3. ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
  - a) ☒ All    b) ☐ Some\*    c) ☐ None    of the:
    1. ☒ Certified copies of the priority documents have been received.
    2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
    3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).
  - \* Certified copies not received: \_\_\_\_.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.

**THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.**

4. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
5. ☐ CORRECTED DRAWINGS ( as "replacement sheets") must be submitted.
  - (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review ( PTO-948) attached
    - 1) ☐ hereto or 2) ☐ to Paper No./Mail Date \_\_\_\_.
  - (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date \_\_\_\_.

**Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).**
6. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

**Attachment(s)**

- |  |   |
|--|---|
| 1. <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)                                | 5. <input type="checkbox"/> Notice of Informal Patent Application                     |
| 2. <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                       | 6. <input type="checkbox"/> Interview Summary (PTO-413),<br>Paper No./Mail Date ____. |
| 3. <input type="checkbox"/> Information Disclosure Statements (PTO/SB/08),<br>Paper No./Mail Date ____     | 7. <input type="checkbox"/> Examiner's Amendment/Comment                              |
| 4. <input type="checkbox"/> Examiner's Comment Regarding Requirement for Deposit<br>of Biological Material | 8. <input checked="" type="checkbox"/> Examiner's Statement of Reasons for Allowance  |
|  | 9. <input type="checkbox"/> Other ____.   |

/Jeffrey R. West/  
Primary Examiner, Art Unit 2857

## **DETAILED ACTION**

### ***Allowable Subject Matter***

1. Claims 1-5 and 9 are considered to be allowable over the cited prior art for the following reasons:

Dechjaroen, "Performance Evaluation of Voice Over Internet Protocol" discloses a method of assessing speech quality transmitted via a packet based telecommunications network comprising the steps of: storing a sequence of intercepted packets associated with a call (page 5, lines 6-8), each packet containing speech data (page 7, lines 1-4), and an indication of a transmission time of said intercepted packet (page 43, lines 15-17); storing with each intercepted packet an indication of an intercept time of said packet (page 48, lines 21-24); extracting a set of parameters from said sequence of intercepted packets (page 49, lines 1-10); wherein the extracting step comprises the sub steps of: generating a jitter parameter for each packet of said sequence of stored packets in dependence upon a difference between the transmission time of a stored packet and the transmission time of a preceding stored packet of the sequence and a difference between the intercept time of said stored packet and the intercept time of said preceding stored packet (page 49, lines 1-6 and Figure 29); generating a long term average jitter parameter ( $lt\_jitter$ ) for said stored packet in dependence upon the value of said jitter parameter ( $jitter$ ) for said stored packet, the value of said jitter parameter for any preceding stored packets, and a predetermined adaptation rate

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(P) according to the equation:  $It\_jitter = (It\_jitter * P) + (abs(jitter) * (1 - P))$  (i.e.  $J = J + (|D(i - 1, i) - J| / 16)$  (page 49, line 7 to page 50, line 3).

U.S. Patent No. 6,665,317 to Scott teaches a method, system, and computer program product for managing jitter of packets across a VoIP system (column 1, line 65 to column 2, line 2) that calculates a long term jitter parameter in dependence upon a value of jitter for a stored packet and a value of jitter for any preceding stored packets (column 5, lines 22-23 and 41-46) and a differential jitter (i.e. jitter variance) in dependence upon the jitter parameter and the long term jitter parameter (column 5, lines 22-25).

Rix et al., "Non-intrusive monitoring of speech quality in voice over IP networks" teaches non-intrusive monitoring of speech quality in VoIP networks comprising storing a sequence of intercepted packets, containing speech data, associated with a call (page 4, lines 23-24 and "Capture" in Figure 3), extracting a set of jitter parameters from said sequence of intercepted packets (page 5, line 4 and "Extract Params" in Figure 3), and generating, and inherently storing on a medium for user-visualization/analysis, an estimated mean opinion score in dependence upon said set of parameters (page 5, lines 5-6 and "Predict MOS" in Figure 3).

U.S. Patent Application Publication No. 2003/0018450 to Carley teaches a system and method for providing composite variance analysis for network operation of a packet based network (0002, lines 1-9 and 0017, line 1 to 0024, line 3) comprising means for extracting and storing a jitter parameter performance metric for a sequence of packets (0041, lines 1-23) determining a variance statistic for the

performance metric (0045, lines 1-8) and determining a subsequent standard deviation of the determined variance statistic (0047, line 4 to 0048, line 7), wherein the variance statistic includes a plurality of maximum values and standard deviations of sub-sequences of the performance metric (0068, lines 11-19).

Demichelis et al., "IP Packet Delay Variation Metric for IP Performance Metrics (IPPM) teaches methods for determining metrics for variation in delay of packets across Internet paths.

Internet Glossary of Statistical Terms, "Variance" and "Standard Deviation" teaches the definitions for "Variance" and "Standard Deviation" as well as that in order to calculate the variance, a mean/average must first be determined, as well as that in order to calculate the standard deviation, a variance must first be determined.

Schulzrinne teaches a method and system for determining jitter measurements of packets across IP in audio/voice applications ("2. RTP Use Scenarios" and "2.1 Simple Multicast Audio Conference") including means for generating a long term average jitter parameter ( $lt\_jitter / J$ ) for a stored packet in dependence upon a value of a jitter parameter ( $jitter / D(i-1, i)$ ) for said stored packet, a value of said jitter parameter for any preceding stored packets, and a predetermined adaptation rate ( $P / 15/16$ ) according to the equation  $lt\_jitter = (lt\_jitter * P) + (abs(jitter) * (1 - P))$  (i.e.  $J = J + (|D(i-1, i) - J| / 16)$  ("6.3.1 SR: Sender report RTCP packet").

U.S. Patent Application Publication No. 2003/0086425 to Bearden teaches network traffic generation and monitoring systems and methods for their use in testing frameworks for determining suitability of a network for target applications,

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such as VoIP network applications (0006, lines 1-10), comprising means for extracting a set of speech quality parameters, including jitter, and, generating an estimated mean opinion score in dependence upon the set of speech quality parameters (0085, lines 1-13) and storing the estimated mean opinion score on a computer-readable medium accessible by a user for visualization and analysis (0259, lines 1-19).

U.S. Patent Application Publication No. 2004/0071170 to Fukuda teaches a communication system, transmission terminal, and reception terminal

U.S. Patent No. 6,868,094 to Bordonaro et al. teaches a method and apparatus for measuring network data packet delay, jitter and loss.

As noted above, while the invention of Dechjaroen does teach extracting a set of jitter parameters including inter-packet jitter and long-term average jitter, the invention of Scott does teach determining a differential jitter parameter, and the invention of Rix does teach determining an estimated mean opinion score, the invention of Rix only discloses determining an estimated mean opinion score based on undefined extracted parameters and does not teach or suggest, to one having ordinary skill in the art, estimating a mean opinion score based on the specific jitter parameters taught by Dechjaroen and Scott or as claimed.

As such, the proposed combination is not explicit in teaching or suggesting to one having ordinary skill in the art, a method/apparatus for assessing speech quality transmitted via a packet based telecommunication network comprising the steps



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of/means for: generating an estimated mean opinion score in dependence upon a set of parameters, the set of parameters extracted by: generating a jitter parameter for each intercepted packet of a sequence of stored intercepted packets in dependence upon a difference between a transmission time of a stored intercepted packet and a transmission time of a preceding stored packet of the sequence, and a difference between the intercept time of said stored intercepted packet and the intercept time of said preceding stored intercepted packet, generating a long term average jitter parameter ( $It\_jitter$ ) for said stored packet in dependence upon the value of said jitter parameter ( $jitter$ ) for said stored intercepted packet, the value of said jitter parameter for any preceding stored intercepted packets and a predetermined adaptation rate ( $P$ ) according to the equation:  $It\_jitter = (It\_jitter * P) + (abs(jitter) * (1 - P))$ ; generating a differential jitter parameter in dependence upon the jitter parameter for said stored intercepted packet and the long term average jitter parameter, and in which said set of parameters includes said differential jitter parameter.

2. Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

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3. Any inquiry concerning this communication or earlier communications from the examiner should be directed to JEFFREY R. WEST whose telephone number is (571)272-2226. The examiner can normally be reached on Monday through Friday, 8:30-5:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Eliseo Ramos-Feliciano can be reached on (571)272-7925. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Jeffrey R. West/  
Primary Examiner, Art Unit 2857

September 16, 2009